

The proposed discharge from the Park is an average of 9,500 gallons per day of sanitary wastes to septic tank-subsurface disposal systems. The wastes will be generated from restroom facilities, a laundry facility, and 35 sewer connections to recreational vehicle sites. An additional 62 spaces will be provided for self-contained vehicles which will discharge their wastes to a holding tank.

There are three water supply wells on the petitioner's property of varying depth and water quality. The first two wells with a depth of 20 to 120 feet are planned to serve as domestic supply. The third well, which is presently used for minor landscape irrigation, is about 285 feet in depth. The quality of water produced from these wells is as follows (August - September 1975):

<u>Constituent (mg/l)</u>	<u>Domestic Supply</u>		<u>Irrigation</u>
	<u>Well #1</u>	<u>Well #2</u>	<u>Well #3</u>
Filtrable Residue	513	510	288
Total Hardness	370	364.7	11.6
Calcium	98	100	4.0
Magnesium	30.5	28	0.4
Sodium	24	22.5	94
Potassium	2.9	2.2	0.40
Carbonate	--	--	9.0
Bicarbonate	356.2	385.5	50.0
Sulfate	102	86	122
Chloride	22.5	20	23
Fluoride	0.80	0.97	8.1

The Water Quality Control Plan Report, Santa Ana River Basin (8) (Basin Plan), describes the area in which Gem Ranchkamp is situated as "nonwater bearing". (Basin Plan, Page 4-23.) The identified groundwater basin nearest to the discharger is the Bunker Hill I Basin at a distance of approximately 3 miles. The groundwater objectives for this basin were used by the Regional Board to formulate the waste discharge requirements. Groundwater in the area of the proposed discharge is tributary to the Bunker Hill I Basin, entering the basin near the communities of Devore and Devore Heights.

The beneficial uses of the Bunker Hill I Groundwater Basin are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

The adopted waste discharge requirements, among other things, limit the proposed discharge as follows:

"The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board), finds that:

"2.a. Gem Ranchkamp proposes to discharge an average of 9,500 gallons per day (36 m³/day) of sanitary wastes to septic tank-subsurface disposal systems. The wastes will be generated from 35 spaces at this recreational vehicle park, in addition to restroom facilities and a laundry facility."

"IT IS HEREBY ORDERED that the discharger shall comply with the following:

"A. Discharge Specifications

"1.a. The discharge of wastes as described in Finding 2.a. above shall not contain concentrations that exceed the following listed values for the constituents specified:

<u>Constituents</u>	<u>Average Concentration (mg/l)</u>
Filtrable Residue	490
Total Hardness	210
Sodium	65
Sulfate	75
Chloride	55
Boron	0.5
Fluoride	1.5

"1.b. The discharge of wastes as described in Finding 2.a. above shall not contain concentrations that exceed those of the same substance in the water supply by more than the following increments:

<u>Constituents</u>	<u>Average Increment (mg/l)</u>
Filtrable Residue	230
Total Hardness	20
Sodium	50
Sulfate	40
Chloride	45

"The requirement specified in A.1.a. or A.1.b. which results in the minimum concentration shall predominate."

Comparison of discharge requirements and the water quality of Wells Nos. 1 and 2 indicates that when extracted, even without any usage, the water from these wells cannot meet the filtrable residue discharge limitation of 490 mg/l. Well No. 3 cannot be utilized for potable water due to excessive concentrations of fluoride. According to the Staff Report presented to the Regional Board at the time of the adoption of the discharge requirements, Mr. Bayless checked into obtaining alternative water supplies from the nearby town of Devore. The town of Devore informed Mr. Bayless that its source was unavailable due to water rights problems. At any rate, a letter from the petitioner to the Regional Board Executive Officer, dated December 18, 1975, indicates that Devore cannot meet the Bunker Hill I basin objectives with its water supply. Water may be available from San Bernardino; however, this source is five miles from the proposed Gem Ranchkamp Park.

II. CONTENTIONS AND FINDINGS

Petitioner generally contends that the aforementioned action of the Regional Board was inappropriate and improper and he requested that the State Board change Order No. 76-4 to allow the discharger to use its existing water supply for the proposed recreational vehicle park without treatment for mineral removal. Specific contentions and our findings relative thereto are as follows:

1. Contention: The San Bernardino office of the Department of Health has determined that Wells Nos. 1 and 2 are of acceptable quality for domestic supply; therefore, the discharger should be allowed to use and discharge these waters without treatment.

Findings: This contention is without merit. In prescribing waste discharge requirements, the Regional Board must consider informa-

tion relevant to the protection of surface and groundwaters from degradation due to waste discharges. Whether the supply water is of sufficient quality for human consumption is irrelevant to the protection of groundwater quality.

2. Contention: Petitioner contends it is unjust to impose the requirements included in Order No. 76-4 on the Gem Ranchkamp without imposing similar requirements on others in the area.

Findings: This contention is inappropriate. Waste discharge requirements are issued for an individual discharger on a case-by-case basis after the Regional Board has considered all relevant factors and evidence pursuant to Water Code Section 13263, including the effects of other existing discharges to a particular water body which may preclude additional discharges or require that any additional discharges be of a higher quality than existing discharges.

3. Contention: Petitioner contends that the requirements of Order No. 76-4 would result in an unreasonable economic hardship on the discharger in that, in order to meet the requirements, it will be necessary to treat the water supply and dispose of the 3,000 gallons per day of reverse osmosis brine produced.

Findings: The proposed water supply has been approved for domestic use by the local health department, and if used without further treatment, it would be the least expensive water supply available to the petitioner. In considering treatment of the water supply, it should be noted that the demand is expected to be highly seasonal and any treatment process would either have to be designed for the peak flow period or have to have storage capacity. Thus, a large investment would be idle much of the year.

There are generally two acceptable methods for the disposal

of brine waters which would be produced. Transporting the brine to a disposal site approved by the Regional Board would be an acceptable alternative, although it would result in high costs and energy requirements for necessary storage and conveyance of the wastes. An alternative disposal method for the brine would be to discharge to evaporation ponds that would not allow continuity with surface or groundwaters. The costs involved with this alternative would be the additional land required, the construction and maintenance of the disposal ponds, and the disposal of the accumulated salts in the ponds.

Based upon our findings under Contention Number 5 below, this Order makes no findings with regard to the reasonableness of the costs of compliance with the TDS requirements currently included in Regional Board Order No. 76-4.

4. Contention: The monitoring requirements included in order No. 76-4 would result in an unreasonable economic hardship on the discharger.

Findings: The effluent monitoring program included bimonthly sampling and analysis of each septic tank subsurface discharge as follows:

<u>Constituents</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Electrical Conductivity	micromhos/cm	Bimonthly
Flow	gallons	Bimonthly (total)
Sodium	mg/l	Bimonthly
Potassium	mg/l	Bimonthly
Calcium	mg/l	Bimonthly
Magnesium	mg/l	Bimonthly
Total Hardness	mg/l	Bimonthly
Ammonia (as N)	mg/l	Bimonthly
Sulfate	mg/l	Bimonthly
Chloride	mg/l	Bimonthly
Bicarbonate	mg/l	Bimonthly
Carbonate	mg/l	Bimonthly
Nitrate	mg/l	Bimonthly
Fluoride	mg/l	Bimonthly
Boron	mg/l	Bimonthly

The proposed project was to have eight or nine new septic tank systems due to the varying levels of the site. However, the requirements allow prorata pooling of the samples from each of the septic tanks. Estimated laboratory cost for the above monitoring program is in the range of \$30.00 to \$50.00 for each sample tested. Therefore, the bimonthly laboratory cost to the discharger for effluent sample analysis would be \$30.00 to \$50.00.

We find that this monitoring program is not excessive in light of the need to provide adequate protection to the groundwaters of the area.

5. Contention: Petitioner contends that the mineral requirements of Order No. 76-4, which were based on the water quality objectives for the Bunker Hill I Groundwater Basin, are inappropriate in that the proposed discharge is located outside the boundaries of the Bunker Hill I Groundwater Basin and is of minimal seasonal flow in a remote area and, therefore, will have no significant impact on the quality of water in the basin.

Findings: The Basin Plan designates the area in which Gem Ranchkamp is located as "nonwater bearing" and does not identify beneficial uses or specify water quality objectives for the area groundwater. The term "nonwater bearing" was used in the development of the Basin Plan to refer to any area without aquifers which could provide a dependable surface or groundwater supply to support municipal or agricultural development, i.e., areas which do not have known or substantial quantities of surface or groundwater available, and which, therefore do not have a significant effect on adjacent groundwater basins.

In establishing the effluent filtrable residue limitation in Order No. 76-4 the Regional Board considered the Bunker Hill I Groundwater Basin water quality objective of 260 mg/l filtrable residue (present average water quality) and the average assimilative capacity available for the entire basin of 230 mg/l. Adding the objective and assimilative capacity, the Regional Board arrived at the 490 mg/l requirement. The assimilative capacity for the particular area of Cajon Canyon between the Gem Ranchkamp site and the Bunker Hill I Basin was not determined or utilized in determining the waste discharge requirements.

The evaluation of the State Board staff geologist concerning the effect of the proposed discharge on water quality in the Santa Ana Region contained the following conclusions:

1. The valley fill of Cajon Canyon extends continuously from the lower portion of the Gem Ranchkamp property to the Bunker Hill I Groundwater Basin in the vicinity of Devore. I found no evidence of any faults or other geologic features that might be a barrier to groundwater flow from the Ranchkamp area to Devore.
2. Most of the recharge to the Bunker Hill I Basin enters from the San Bernardino Mountains to the northeast. The remainder of the Cajon Creek watershed consists of lower elevation and/or "dry side" portions of the San Bernardino and San Gabriel mountains having much less rainfall and runoff than the higher "wet-side" of the San Bernardino Mountains.
3. Only Devore Water Company's Well No. 4 could possibly be affected by the proposed Gem Ranchkamp discharge. The Company's other water sources are all upgradient from the probable flow path of any degraded waters from the discharge."
4. The proposed Gem Ranchkamp discharge's effect on the quality of the Bunker Hill I Basin's groundwater depends on the quantity of the discharge and the difference in mineral content between the supply water and the discharge. Even if no discharge takes place, some degradation will take place as groundwater moves downgradient from the Ranchkamp area to the main part of the basin simply because the Ranchkamp area's groundwater quality is poorer.

The evaluation of the State Board staff geologist indicates that a certain amount of degradation of the Bunker Hill Groundwater Basin occurs naturally as a result of inflow from the nonwater bearing area.

The Basin Plan for the Santa Ana River Basin was carefully developed by the Regional Board to, among other things, provide adequate protection for groundwater quality in that area. The Plan provides in Chapter 5 (entitled "Implementation Plan") that the "Increment of "salt added" by domestic and industrial users should average approximately 230 mg/l TDS for the entire Basin." (See page 5-10.)

The question with which we are faced in this case is whether the Regional Board's use of the Bunker Hill Basin I dissolved solids objective as the base number to which the 230 mg/l increment was added was appropriate. In light of our staff geologist's finding that lower quality water from the nonwater bearing area reaches the Bunker Hill I basin under natural conditions, we find that use of the Bunker Hill I objective as the base number was inappropriate. As we interpret the Basin Plan, the increment of salt permitted to be added by a proposed discharge under circumstances such as those under consideration here is that salt over and above what would naturally enter the basin. This is the amount of salt which is truly "added" to the natural system by the discharge.

We do not intend by this finding to indicate that the Regional Board must permit all proposed dischargers to add the full 230 mg/l increment of salt. The policy quoted above provides that the incremental increase averaged over the entire basin should not exceed the 230 mg/l figure and it may be that in certain instances the Regional Board will find it necessary to permit less or more than a 230 mg/l incremental increase. Nevertheless, it is important that the proper base number

be used in order to provide equitable treatment to all existing and potential dischargers into the basin.

In this particular case, the quality of water in the non-water bearing area is the appropriate base dissolved solids level. The Regional Board should issue waste discharge requirements for the proposed discharge using this base level.

IV. CONCLUSION

After review of the entire record, and for the reasons heretofore expressed, the State Board concludes that the action of the Regional Board in adopting Order No. 76-4 was inappropriate and improper.

V. ORDER

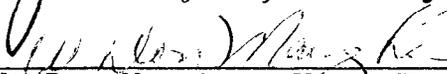
IT IS HEREBY ORDERED that Order No. 76-4 is remanded to the Regional Board for rehearing and reconsideration of waste discharge requirements and for action consistent with the findings and conclusions of this Order.

Dated:

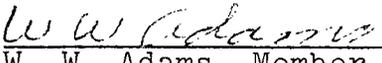
JUN 16 1977



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Jean Auer, Member